

Model Paper

GOVERNMENT COLLEGE UNIVERSITY, FAISALABAD

B Sc. (Part-1)

Annual -2017

Subject: Botany

Course Title: Diversity of Plants

Paper: - A

Time Allowed: 03:00 Hours

Maximum Marks: 35

Pass Marks: 33%

Note: Attempt any FIVE questions by selecting TWO questions from Section-I and THREE questions from Section-II. Elaborate your answers with labeled diagrams, where necessary.

SECTION-I

Q-1 a) What are various steps during the replication of virus? (03)

b) Explain autotrophic mode of nutrition in bacteria. (04)

Q-2 Write notes on:

a) Sexual Reproduction in Vauchena (04)

b) Globule of chara (03)

Q-3 Describe the life Cycle of Ustiligo. (7)

SECTION-II

Q-4 Compare the Sporogonium of Anthoceros with that of Porella. (7)

Q-5 Discuss the life cycle of Marsillia. (7)

Q-6 Describe the internal structure of rhizome of Psilotum. (7)

Q-7 Describe the male and female cone of Pinus. (7)

Q-8 Describe the stem Anatomy of Ephedra. (7)

Model Paper

GOVERNMENT COLLEGE UNIVERSITY, FAISALABAD

B Sc. (Part-1)

Annual -2017

Subject: Botany

Course Title: Plant Systematics Anatomy & Development

Paper: - B

Time Allowed: 03:00 Hours

Maximum Marks: 35

Pass Marks: 33%

Note: Attempt any FIVE questions by selecting at least TWO questions from each section. Elaborate your answers with labeled diagrams, where necessary.

SECTION-I

- Q-1 a) What is plant systematics? Difference between phylogenetic and artificial systems of Classification. (04)
- b) Give significance of binomial nomenclature. (03)
- Q-2 a) Define Inflorescence. Differentiate between cymose & recemose inflorescence. (04)
- b) Define spike, catkin & umbel. (03)
- Q-3 a) Differentiate between tap root & adventitious root. Write modification of tap root. (04)
- b) Define stilt root & prop root. (03)
- Q-4 Write distinguishing features of family solanaceae. Give its economic importance; write botanical names of least four economically important plants. (07)

SECTION-II

- Q-5 a) What are PITS? Differentiate between simple pits and bordered pits. (04)
- b) Give structure of bordered pit pair and half bordered pit pair. (03)
- Q-6 Define tissue. Differentiate between SIMPLE and COMPLEX TISSUE. Write different types of simple tissues. (07)
- Q-7 a) Differentiate between primary and secondary growth. (03)
- b) Write secondary growth in dicot stem. (04)
- Q-8 Write notes on: -
- a) meristem and its types. (04)
- b) vessels and tracheids. (03)

Model Paper

GOVERNMENT COLLEGE UNIVERSITY, FAISALABAD

B Sc. (Part-II)

Annual -2017

Subject: Botany

Course Title: Cell Biology, Genetics and Evolution

Paper: - A

Time Allowed: 03:00 Hours

Maximum Marks: 35

Pass Marks: 33%

Note: Attempt any FIVE questions by selecting at least TWO questions from each section. Draw suitable diagrams, where necessary.

SECTION-I

- Q-1 a) Discuss the structure and function of Lipids. (03)
b) Describe the structure of DNA. (04)
- Q-2 a) Describe Ultra structure and functions of Mitochondria. (04)
b) Write a note on Dictyosomes. (03)
- Q-3 a) What is Meiosis? Discuss briefly the Meiosis- I. (04)
b) What is significance of Mitosis? (03)
- Q-4 a) Describe Physico-chemical nature of cytoplasm. (04)
b) Write a note on Karyotype analysis. (03)

SECTION -II

- Q-5 a) What is sex linked inheritance? Explain sex Linkage in man (colour blindness). (04)
b) Write a note on linkage and crossing over. (03)
- Q-6 What is translation? Give a detail account of protein synthesis. (07)
- Q-7 a) What is gene mutation? Describe physical and chemical mutagens. (04)
b) Write a note on release of new varieties. (03)
- Q-8 a) Give an account of Darwin's theory of evolution. (04)
b) Write a brief note on genetic conservation. (03)

Model Paper

GOVERNMENT COLLEGE UNIVERSITY, FAISALABAD

B Sc. (Part-II)

Annual -2017

Subject: Botany

Course Title: Physiology and Ecology

Paper: - B

Time Allowed: 03:00 Hours

Maximum Marks: 35

Pass Marks: 33%

Note: Attempt any FIVE questions in all but not more than THREE from any section.

SECTION-I

- Q-1 a) What are psychological role and deficiency symptoms of nitrogen, phosphorus and calcium in plants? (04)
- b) How the molecular nitrogen of the atmosphere is fixed? (03)
- Q-2 a) Briefly discuss the mechanism of photosynthesis explaining photolysis, energy and CO₂ fixation. (04)
- b) Write a short note on Plant Tissue Culture. (03)
- Q-3 a) Write a short note on Krebs cycle. (04)
- b) Define and discuss photoperiodism. What is the significance of hormones in Photoperiodism? (03)
- Q-4 What are Enzymes? How they are classified? Discuss their nature and properties. (07)

SECTION -II

- Q-5 a) What is Soil Organic matter and its importance? (03)
- b) What is Soil Erosion? Discuss Soil Erosion by wind and its control. (04)
- Q-6 a) Give an account of water cycle in nature and its importance of atmospheric moisture to plants. (04)
- b) Briefly discuss the impact of Wind as an ecological factor. (03)
- Q-7 a) Define an Ecosystem. Discuss ecological energetic in terms of Food chains, Food web and Tropic levels. (04)
- b) Write a short note on desertification. (03)
- Q-8 a) What is productivity? Briefly give an account of different methods of its measurement. (04)
- b) Write a short note on conservation of natural resources. (03)